

to meet the competition of *P. rapae* (*Vide A Field Guide to the Butterflies of North America East of the Great Plains*, pages 200-201). All these species feed on various *Cruciferae*. As Mr Sevastopulo would say "surely there is *cruciferae* enough for all".

In most cases I'm sure that there is; and similarly in most localities where *cydippe* and *aglaia* compete, neither is numerous enough to exhaust supplies of dog violet. Competition for food plant is probably not the critical factor in these cases. Something else is involved—perhaps the need for *lebensraum*? Whatever this unknown factor (or set of factors), there is little doubt that one species occupying its own particular ecological niche can be displaced from it by a similar (more vigorous) one occupying roughly the same position in the environment, even while this environment remains stable. I believe that this concept is recognised in all fields of zoology. A subtle ecological change can hardly have affected the former ranges of both *protodice* and *napi* in America in the same areas and at the same time that *rapae* has advanced and the two *indigenae* have declined.

I certainly have no simple answer to the mechanics of inter-specific competition, but it does exist, when both ecological conditions are stable and when there is sufficiency of food plant.

Perhaps Mr Sevastopulo could shed some light on what troubles him so much about this concept?

Late Autumn in the Isles of Scilly

By R. P. DEMUTH

(Watercombe House, Oakridge, Glos.)

In an attempt to break new ground I visited St. Mary's between October 16th and 22nd 1973. I stayed at Normandy in the south-east corner of the island to obtain shelter from the anticipated westerly gales. I was also within a quarter mile of the shore line and an extensive fresh water marsh.

I might say that I went with high hopes of exciting migrants filling the M.V. trap and my optimism was braced by information that at least one *Anosia plexippus* L. was at that moment flying on the islands; a *Leucania unipuncta* Haw. in the M.V. trap at Lamorna Cove on my last night on the mainland and the taxi driver at St. Mary's who drove us to Normandy and explained that he had a *Herse convolvuli* L., which he had picked up on the quay, in a matchbox (some matchbox!).

The reality was very different. I found that Scilly had a bad autumn from September 15th onwards and on the day of our arrival there was a strong and bitterly cold north wind which persisted for the next three days with clear nights and a near frost. It was difficult to find anywhere suitable for sugaring but I put on a fair round on the trunks of the pollarded elms which act as windbreaks round the daffodil fields.

I sugared about 60 trees. On these cold nights the total visitors each night were 2, 13, 32, which shows how the numbers build up. The next two nights were spoilt by a heavy drizzle which soaked the tree trunks and produced hardly any insects and the final night was cold again with 22. The commonest insect was *Peridroma porphyrea* Schiff., then *Agrotis segetum* Schiff. and the remainder a mixture of *Amathes xanthographa* Schiff., *Noctua pronuba* L., (in good condition and presumably second brood), *Leucania l-album* L., *Omphaloscelis lunosa* Haw., *Apamea ypsilon* Schiff. and *Phlogophora meticulosa* L.

I had brought my generator but, due to the wind, I ran the trap from the house making use of the lee of the building. It produced the same insects as the sugar plus the following:—*Eumichtis lichenea* Hübn., the commonest insect and 50% of the total catch, *Aporophyla nigra* Haw., the next commonest, *Rhizedra lutosus* Hübn. also common and a few *Ochropleura plecta* L., *Amathes c-nigrum* L., *Agrochola lota* C. and five *Plusia gamma* L. (when I left Gloucestershire my M.V. trap was bringing in over a hundred *gamma* a night).

There were virtually no butterflies in spite of the sunshine and I only saw four altogether — 2 *Colias croceus* Fourc., 1 *Pyrameis atalanta* L. and 1 *Pararge aegeria* L. No sign of *plexippus*; I understood it was on St. Agnes and had been sighted five times.

Notes on the Distribution of Some Dragonfly Species (Odonata, Anisoptera) of Bengal

By TRIDIB RANJAN MITRA AND A. R. LAHIRI

(Entomology Laboratory, Dept. of Zoology, Calcutta University)

The present note is based on a collection of specimens collected from different parts of Calcutta by the authors and some of their friends from 1966 to 1972. Sixteen examples belonging to five species spread in five genera were collected. Though all the species are known to have wide geographical distribution, it was considered worth-while to publish a short note on this material since it contains four species newly recorded from Bengal (W. Bengal in Union of India and Bangladesh) and one needs some remarks on its distribution in Bengal.

All the species recorded here belong to two superfamilies, spread in three families. Four are Old World species and the other is known from both Old and New Worlds.

Superfamily: Aeshnoidea.

Family: Aeshnidae.

1. *Hemianax ephippiger* (Burmeister)

1♀, 30th June 1966, Calcutta (at dusk), Coll. G. C. Sarkar.

This is the first record of its distribution in Northeast India. It is also recorded from other parts of India. Besides India, it is also recorded from Pakistan, Persia, Baluchistan, Mesopotamia, Africa, N. Asia and S. Europe. Blackman and Pinhey (1967) also reported its capture at dusk.